



A Review of Agricultural Intervention Programs and their Extension Delivery System in Nigeria

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ABSTRACT

This paper reviewed the agricultural development interventions programs and their extension approaches. Agricultural intervention program is a plan by a country to support its agricultural development, increase food production and welfare among smallholder farmer in collaboration with concerned stakeholders. The review indicated that there were a number of agricultural development intervention programs in Nigeria with the objective of improving the level of agricultural production and productivity. However, records reveal that some of the programs have achieved little or no progress. The first period of agricultural intervention program dated back to the colonial era in which the agricultural policy of the colonial administration was primarily focused on encouraging only export crops at the detriment of the nation towards agricultural production and productivity and the extension approach was by demonstration approach to farmers. The second period was when several institutions performed agricultural extension services. Among such institutions where the River Basin Development Authorities (RBDA), Green Revolution (GR), Operation Feed the Nation (OFN), Directorate for Food, Roads and Rural Infrastructure (DFRRI) and Agricultural Development Programs (ADPs), among others, yet, the sector's performance was far below expectation. The extension approach was Training and visit (T&V) system of extension which Nigeria operates until early nineties when Unified Agricultural Extension System (UAES) was introduced. This approach required that the frontline extension agents of the ADP take messages to farmers in all the sectors of agriculture. The major stakeholders include the states ADPs, National Agricultural Research System, private sectors and the Research Extension Farmer-Input Linkage System (REFILS). Based on this review, it is recommended that the agricultural extension system should be detached from its dependence on the civil service agencies and regulations.

Keywords: *Agriculture, Intervention, Program, Extension, delivery system.*

INTRODUCTION

Historically, the beginning of agricultural extension systems in Europe has been traced to the mid-19th century potato famine in Ireland, where agricultural advisors from the United Kingdom taught farmers how to grow alternative food crops. A few years later, in (1867), Oxford and Cambridge Universities in England started sharing the practical knowledge generated by their faculties with neighboring communities (Swanson and Claar, 1984). The European potato famine in 1845-51 highlighted the need for institutionalizing agricultural extension. Agricultural extension is fundamental in the transformation process of agricultural production activities in many parts of the world and the extension function is crucial for

sustainable agricultural development (Ani, 2007). Thus, agricultural extension is most important which serve as the foundation in the transfiguration process of agricultural development .Agricultural extension and advisory systems in Oxford and Cambridge universities in the United Kingdom firstly used extension as a term to explain adult education programs in 1867. These programs assisted in expanding the message of the universities outside of campus's borders and entering into the nearby communities. Extension as a term was officially adopted in the United States in the 1860's. Later on, research activities were included in 1887 with extension activities moreover started in the 1890's.Elsewhere, Japan created the first agricultural extension service in Asia in 1899 (Swanson and Rajalahti, 2010).Agricultural extension activities were officially called advisory services in the United Kingdom in the beginning of the 20th century. The majority of the European countries also used this same term. Nevertheless, in the United States and Canada, agricultural extension operations or activities were called extension services. The term that the donor agency used was commonly carried to the developing countries where the donor agencies played a part of building public agricultural extension institutions. For instance, in the 1960s and 1970s the United States Agency for International Development (USAID) was involved in setting up agricultural universities in addition to research and extension systems in many developing countries.

Agricultural intervention program is a plan by a country to support its agricultural development, increase food production and welfare among smallholder farmer in collaboration with concerned stakeholders (Koyenikan, 2008). Agricultural intervention program is a support for agricultural policy and regulatory frameworks to deliver on government expectation, contributing to increasing food security, as well as serving as a vehicle for rural employment, depends on robust evidence-based policies, capable of repositioning the agricultural sector to contribute effectively to economic development in collaboration with the key stakeholders including agricultural extension among others (FAO, 2019).

According to Gwyn and Chris (1999), the history agricultural extension service in Nigeria is intertwined with political history, the services is a significant social innovation, an important force in agricultural change, which has been created and recreated, adapted and developed over the centuries. Anaeto *et al.* (2001) opined that the organizations and personnel engaged in agricultural extension encompass various ranges of social control and legitimate activities which seek to improve the activities of farm people to adopt more appropriate and new practices and to adjust to changing conditions. Nevertheless, the near collapse of extension service institutional framework is evident. Agricultural extension is a business which flourishes when an enabling environment is provided for its growth and development (Agbamu, 2016). It is important to note that the sector presents a degrading state of neglect in spite of its potentials and contributions to the national economy. Moreover, under development with ever increasing cases of population growth, incessant rural urban migration of exuberant youth, malnutrition, lack of basic human needs and poor road network prevail(Anaeto *et al.*,2001).,It is against this background that this paper reviewed agricultural intervention programs and extension delivery system based on the following titles: Overview of agricultural extension intervention programs and their extension service delivery; the stages of agricultural extension system; the present agricultural extension intervention Programs; and Major Stakeholders in Extension Delivery System.

Overview of Agricultural Intervention Programs and their Extension Approaches in Nigeria

According to Atala (2001), the first period of extension system dates back to the colonial era when regional governments offered extension using the demonstration approach to farmers. Akubuilu (2008) the second period was in the post-independence era when several institutions provided agricultural extension services. These include the Farm Settlement Scheme (FSS) of the 1960s which were operated in the former Western and Eastern Nigeria aimed at providing young school leavers with practical training in agriculture. It was also intended that farmers in the neighboring villages will learn new ideas from the settlers. The National Accelerated Food Production Program (NAFPP) was launched in 1972 by the federal government to accelerate the production of six major crops in Nigeria, rice, Maize, Cassava, Sorghum, Millet and Wheat. Perez (1976) the aim is to increase the farm yields of small-scale farmers by their adoption of improved varieties which are responsive to nitrogen and improved management, by developing well organized and well trained extension workers and farmers and by developing effective support agencies to supply all the production inputs, arrange storage and marketing. The Operation Feed the Nation (OFN) was launched in 1976 with the aim of encouraging massive food production across the country. With little attention to a well-articulated extension system, the program ended by marketing a little impact. River Basin Development Authority (RBDA) (1973) charged with the development of irrigated agriculture in identified river basins in different parts of the country. The river basins employed different extension approaches. Their mandate was however later redefined to exclude extension services. Green Revolution (GR) (1979) which sought to bring about radical changes in Nigerian agricultural production and eliminate inherited food problems of successive government. Large, medium and small-scale farmers received a number of incentives to boost their production level during the implementation of the program. (Jibowo and Ajayi, 2011). It is also a period in which extension workers were involved in input supplies and credit procurement. In mid-seventies, World Bank assisted Agricultural Development Project (ADP) was introduced and with them the progressive target of contact farmers became standard. The approach metamorphosed by mid-eighties to the full introduction of Training and visit (T&V) system of extension. T&V extension was vigorously promoted by the World Bank in more than 50 countries, and religiously adopted in Nigeria. More than ninety-five percent (95%) of the agricultural extension services delivery in Nigeria is provided by the government through the state agricultural development project (ADPs) using the T&V approach (Madukwe, 2004). According to Hamisuet *al.* (2007). T and V extension approach was finally abandoned in the late 1990s by its promoters, and this led to the introduction of the Unified Agricultural Extension System (UAES). This approach or system required that the frontline extension agent of ADP takes message to the farmer in all the sectors of agriculture. Consequently, the agents should be knowledgeable enough to be able to disseminate message in the various field of agriculture. Auta and Dafwang (2010) opined that ADPs were first launched in 1972 to increase food production and to raise the income of small-scale farmers. The success of the pilot schemes led to its expansion nationwide by 1984. Today the ADPs in majority of the states stand just as symbols of past glory because ADPs have very weak funding status. Despite the funding problems, 89% of the state ADPs paid visits to farmers, 68% established Small Plot Adoption Technique (SPAT), while 54% established On-Farm-Adaptive Research (OFAR). The benefits of the ADPs according to Auta and Dafwang (2010) were to be realized through: A re-organized and revitalized agricultural extension system that integrates extension workers training and farm visits and ensure two-way communication between farmers and research; An effective farm inputs distribution system which operates through a network of farmer service centers

(FSC) ensuring that supplying the needed farm inputs are reliable and are in close proximity to their farms; Network of rural feeder roads to assist with farm produce evacuation as well as cost effective farm input distribution. An autonomous ADP Management Unit that is stripped of the usual civil service bureaucratic procedures and therefore possess flexibility to promptly take management decisions in line with the demands for timeliness in agricultural operation. A rigorous monitoring and management system that provides needed management information and ensures that errors in one project are not perpetuated there or in another project.

Development of Agricultural Extension Delivery System in Nigeria

Jibowo (1992) traced the historical background to agricultural extension service delivery in Nigeria. According to him, the Nigeria's national agricultural extension system come forth gradually into being over four centuries from a basic export crops that attract demand in more developed nations which have export value to what can be described as a professional service even if its effectiveness and efficiency remains average. The stages of development of the Nigeria's extension systems can be grouped in to three major periods namely: the colonial and immediate post-independence period between 1893-1968; the oil boom period of 1970-1979; and the state wide Agricultural Development Project (ADP) from 1980-present. The colonial and immediate post-independence period of development of agricultural extension system, the early part of this period 1893-1921 marked the beginning of scientific agriculture in Nigeria and the beginning of direct government involvement in agricultural development. The policy of the colonial government was primarily focused on encouraging only export crops such as cocoa, rubber, palm oil, cotton and groundnut to support the agro-industries in Europe. The extension system strategy was apparently a commodity approach with some enforcement component (Akubuilu, 2008). Extension delivery at that stage was at embryonic level and has dual but conflicting roles of education and law enforcement. The period is characterized by the following extension strategies and approaches: The colonial commodity extension approach; the ministry of agriculture approach; and the revitalized commodity extension strategy and the colonial commodity extension approach. The second stage was oil boom era of 1970-1979 which was near absence of a dynamic research and an effective extension strategy for food crop production in the earlier era was worsened by the oil boom, which turned out to be an "oil doom" for agriculture. The second stage is characterized by the following extension approaches which include: The National Accelerated Food Production Program (NAFPP); Operation Feed the Nation (OFN); the River Basin Development Authority (RBDA) strategies; The Green Revolution; and The Pilot (Enclave) Agricultural Development Projects (ADPs). The third stage is state-wide ADP Era of 1984. This stage of the extension service was characterized by the rapid growth of the ADP concept and reached national coverage by 1989 and had full responsibility for extension delivery at the grassroots Auta and Dafwang (2010). Common to all were an autonomous project management unit, on adaptive research component input delivery system, rural infrastructure component for rural feeder roads and water supply and a systematic extension delivery using basically the Training and Visit Extension approach as propounded by Benor and Baxter (1996) and Promoted by the world Bank in Nigeria and other developing countries (Musa *et al.*, 2013). Apart from the "one-size fits all concept" of the strategy, it has proved to be very regimented, and expensive hence the serious management problems after the withdrawal of the world Bank support to the projects. It has never the less helped to professionalized extension delivery in the country (Buba, 2016). Although the strategy was crop-biased on introduction, this major defect was corrected in 1989 with the introduction of the Unified Agricultural Extension Services (UAES) which made provision for the inclusion to the other sectors such

as livestock, fisheries, forestry, natural resource management etc. Thus, one village extension agent (VEA) is expected to deliver extension messages in all agricultural disciplines (sub-sectors) to the beneficiaries. This was informed by the need to remove the problems of conflicting messages to the clientele by multiple agents. It was also expected to make the system move cost-effective by eliminating duplication of efforts. This extension strategy remains basically top-down in approach and the farmer also still basically remains a passive receptor of information, which may not necessary meet his needs. His involvement and participation in technology development remains low (Agbamu, 2016).

The Current Agricultural Extension Delivery System in Nigeria

This agricultural development programs (ADPs) nationwide remain the main agencies responsible for public extension service delivery at the grassroots Gambo *et al.*, (2016). A recent trend especially since the new democratic dispensation, is the involvement of the local governments in extension delivery, in collaboration with the ADPs. The quality of staff and the resources of the local government are such that they have only been able to make minimal impact Anaeto *et al.*, (2001). While the various modified forms of the training and visit (T&V) extension system remain the basic strategy for public extension delivery, the Research Extension-Farmer-Input-Linkage System (REFILS) is the management mechanism that has been used to identify and bring together the stakeholders in agricultural development as equal partners in development. It provides the structure and mechanisms for collaboration in technology generation, adaptation, dissemination and utilization with clear roles and responsibilities for all partners. Although the REFILS has strengthened the traditionally weak research-extension linkage, private sector participation still remains low just as the farmer's involvement, especially in the research agenda and planning for technology development (Agbamu, 2016).

The Major Stakeholders in Agricultural Extension Delivery System in Nigeria

The major stakeholders include the states ADPs, National Agricultural Research System, private sectors and The Research Extension Farmer-Input Linkage System (REFILS). ADPs in collaboration with the LGAs in some states who are responsible for grassroots extension delivery nationwide, the National Agricultural Research System is responsible primarily for technology development and the private sector is made up of both the commercial organization and Non-Governmental organization. Commercial organizations are responsible for the provision of essential inputs and services including credit and marketing while and the Non-Governmental organizations, are the latest participants in agricultural extension services delivery. Although approaches used by most of the NGOs are generally more participatory, their linkage with both NARS and the public extension service remain weak (Arokoyo *et al.*, 2002). A major feature of the Nigeria agricultural Extension Service in the recent past is the participation of NGOs in extension delivery in Nigeria. These NGOs are divided into two major categories: The charity based NGOs and private commercial organizations. The charity based NGOs are non-profit oriented organizations while private commercial organizations have profit motive associated with their activities. These NGOs in the agricultural and rural development sector, provide a wide range of extension education and technical support services including micro-credit financing and supply of essential inputs in several communities in the country (Wahab, 2011).

Examples of the non-profit NGOs include: the Development Education Centre (DEC) which provides extension support to women to organize themselves into grassroots level self-help association in South-Eastern Nigeria; the women's Advancement Network (WOFAN) in the

North-West, promoting income generation activities among rural women; the farmer Development Union (FADU) and the faith-based Diocesan Agricultural Development Project (DADP) in South-Western Nigeria which aims at poverty alleviation among small-scale farmers (Arokoye *et al.*, 2000). Unique in this group is the international NGO, Sasakawa-Global 2000 which not only work in very close collaboration with the ADPs, but actually uses the already established structures of the ADPs including selected staff who are seconded to the organization. Examples of the private commercial organizations providing extension services include: the shell petroleum company (shell petroleum extension project), the British American Tobacco (BAT), and African cotton (AFCOT) Niger Delta Oil exploratory areas are community-development oriented, public relations outfits, those of BAT and AFCOT are principally commodity-targeted out growers schemes to ensure adequate raw materials for their companies source?

The Research Extension Farmer-Input Linkage System (REFILS) is an organization of Research Extension and input agencies to improve productivity of farmers, which has linked the ADPs staff with the universities and the research institutes and also created easy access to farmers acquiring farm inputs (Nnadozie *et al.*, 2015) also include the government for policy direction even though the policies over the past several decades have neither been friendly nor consistent to sufficiently encourage significant private-sector involvement in meaningful sustainable agricultural development. There are two partners in REFILS-the National Agricultural Extension and Research Liaison Services (NAERLS) of Ahmadu Bello University and the projects coordination Unit (PCU) of the Federal Ministry of Agriculture and Rural Development. While the NAERLS is responsible for the provision of extension specialist support service to the ADPs, the PCU is responsible for the co-ordination, Monitoring and evaluation of their extension delivery activities. The PCU, it must be mentioned is an amalgam of the former Federal Agricultural Coordinating Unit and the Agricultural Project Monitoring and Evaluation Unit (APMEU), both in the Federal Department of Agriculture. Of course, the farmer remains the most important stakeholder and centre piece of REFILS Arokoyo *et al.*, (2002).

CONCLUSION AND RECOMMENDATIONS

It is concluded that there are several agricultural intervention programs that have been developed and executed by governments in Nigeria and that these intervention programs have contributed conspicuously to agricultural development in the country. However, several noticeable limitations were also evident as a result of passive involvement of target beneficiaries of the intervention programs and extension activities. Also in most of the ADPs, the number of extension workers has been reduced drastically due to a number of reasons; notable among them is poor funding. The problem of funding has resulted in reduced extension activities, and that, in turn, has pushed some staff to voluntarily leave the ADPs. As a result, the high numbers of agricultural development intervention programs in Nigeria that have the objective of improving the level of agricultural productivity in the country have made little or no progress in recent years. The performance of agricultural intervention programs/projects which sought to improve food production using the integrated approach to agricultural development in Nigeria is still far below expectation. In the state-wide ADP, the extension strategy remains basically top-down in approach and the farmers also still basically remain passive receptors of information, which may not necessarily meet the needs of the farmers. The present situation where ADPs are left to the unsteady policies of governments both at Federal and State levels is very bad for Nigerian Agriculture if not tackled. The regrettable state of the ADPs is a reflection of the unreliability and frequent changes in the

policies of Governments. If these challenges are not addressed the overall aim of agricultural development programs would not be achieved. In that regard it is recommended that the target beneficiaries (farmers) should be integrated and be seen as active participants in agricultural development programs. In addition, extension service should be seriously involved. Agricultural extension system should be detached from being dependent on civil service rules and regulations to make for their efficiency. Furthermore, Agricultural extension service should be mandated to collaborate with NGOs and international development agencies to keep them abreast with happenings in the sector. The funding of agricultural development projects should be by direct deduction from source from the three tiers of government. All concerned stakeholders should be involved in policy formulation so that decisions are bottom-top in order to meet the needs of the farmers.

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